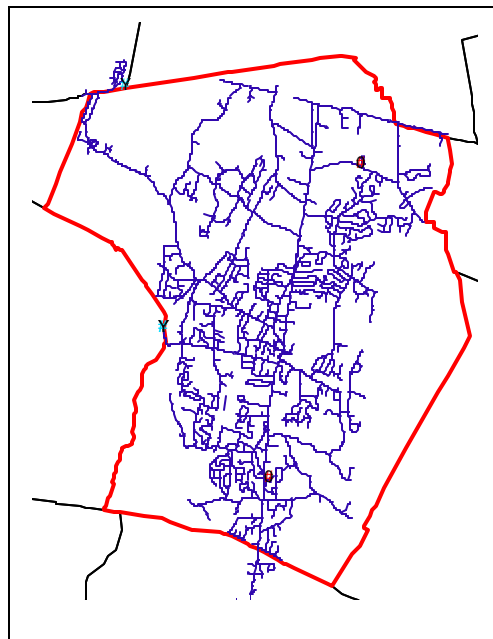


EVALUATION OF COMMUNITY CONCERNS IN CHESHIRE, CT

BACKGROUND

Some Cheshire citizens have expressed concerns about reported contamination in their community and whether such contamination may be related to health effects such as cancer. The Connecticut Department of Public Health (CT DPH), with assistance from the federal Agency for Toxic Substances and Disease Registry (ATSDR) has conducted a Public Health Assessment for Cheshire. ATSDR is a federal public health agency and has a cooperative agreement with CT DPH. A Public Health Assessment is a process that reviews available information about hazardous substances and evaluates whether exposure to them can cause any harm to people. A Public Health Assessment is not the same thing as a medical examination or community health survey. In conducting a Public Health Assessment (PHA), three main sources of information were reviewed: **Environmental data**, such as water sampling data, **Health data**, including available information about rates of diseases in the community compared to state rates, and **Community concerns**. These concerns were obtained by working with the Cheshire Advisory Panel, a community concerns survey, an open house in June 2003 and meetings. This fact sheet summarizes the findings of the Cheshire Community Concerns PHA. If you would like a copy of the PHA, please call (860) 509-7740, or go to the web site provided on the last page.

Cheshire, Connecticut Wellfields



HOW DO WE EVALUATE HEALTH RISKS?

It is important to understand how CTDPH evaluates exposures and how we make **decisions about health risks** for hazardous waste sites. The first step is to find out if there has been exposure to contaminants. Then we try to find out how long people were exposed and to how much contamination. We then estimate cancer and other health risks. Finally, we come to a conclusion about whether the exposure is likely to cause illness. If we conclude that exposures may have caused disease, we may recommend further studies. Here are some concepts important in evaluating health risks to contaminants:

- “**Exposure**” means that you have come into contact (breathing, eating, touching) with a chemical and it has gotten into your body.
- If you are **not exposed** to a chemical, **it won’t make you sick**.
- CTDPH is required to use accepted science-based methods when we evaluate health risks. When CTDPH analyzes environmental data, we use conservative (most protective of health) health guide-

lines and approaches to reach our conclusions and make our recommendations.

- It is very difficult to determine if people have gotten sick from a site, even though it may be shown that people were likely exposed. This is because of many complicated factors:
 - ⇒ Were people exposed long enough and to enough of the contaminant?
 - ⇒ What are other exposures?
 - ⇒ What are some lifestyle issues, such as diet, smoking, etc?

Just because we may not be able to say that people have gotten sick from contaminants, this does not mean the community should not be concerned or work to clean up environmental contamination. Preventing exposures is very important!

UNDERSTANDING CANCER RISK EVALUATION:

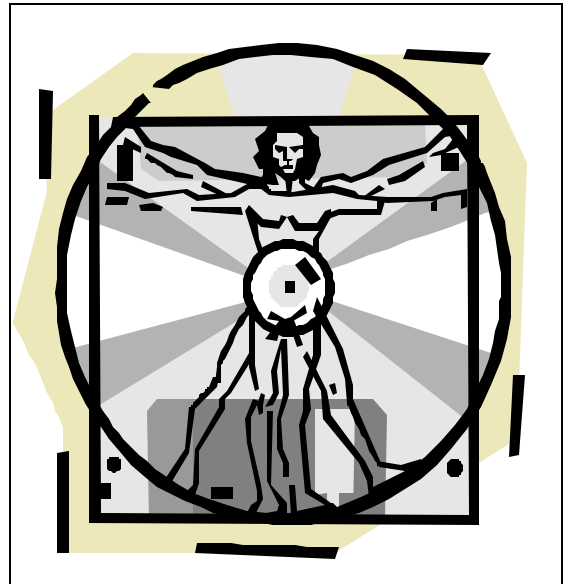
Background:

Cancer is the uncontrolled growth and spread of abnormal cells anywhere in the body. However, cancer is not just one disease; it is actually an umbrella term for at least 100 different but related diseases.

Studies have shown that different cancer types have different causes, patterns of incidence, risk factors, and latency periods (periods between exposure and development of disease).

Here are some basic facts about cancer:

- Each type of cancer has known and/or suspected risk factors.
- Cancer is almost always caused by a combination of factors that interact like diet, genetics, exposures, etc.
- One difficulty in looking at cancer and environmental contamination is the long latency period. This the long period of time between exposure to a carcinogen and development of cancer. Most cancers have a latency period of 10 years or more.
- Cancer is more likely to occur as people get older; more cases of cancer can be expected in the future because people are living longer.



Evaluating Cancer in the Public Health Assessment

Cancer rates were evaluated for the town of Cheshire for the period 1975 - 2000. Seven cancer types were evaluated, as well as overall childhood cancer. The rate of cancer in Cheshire was then compared to the rate of that disease for the entire state of Connecticut. This was done to determine if the rate seen in Cheshire was unusual. The analysis was conducted for males and females separately and was conducted for three separate time periods (1975 - 1984, 1985 - 1994, and 1995-2000). Data for this analysis was obtained from the Connecticut Tumor Registry. This Registry is the oldest and one the best tumor registries in the country. This Registry provides a comprehensive listing of people who have been diagnosed with cancer.

WHAT SITES WERE EVALUATED?

Public Water Supply:

Environmental assessments in Cheshire have focused on past contamination of the public water supply. It is known that the town's public water supply was contaminated with volatile organic compounds (VOCs) from the late 1970s through the late 1980s. Aeration towers were installed which reduced the VOC levels in the drinking water to below the drinking water standards. The VOCs found in the public water supply that were above drinking water standards were trichloroethylene (TCE) and 1,2-dichloropropane (DCP).

Other Sites:

Environmental data from 17 sites of concern in the Cheshire community were also evaluated for their overall impact on the residents of the Cheshire community. On-site soil and groundwater contamination is or was present in the 17 sites at some point. Available environmental sampling data from a very small number of private wells near the sites below were also reviewed. The following sites were evaluated:

Airpax Corporation	Knotter Drive	Holgrath Corporation	30 Knotter Drive
Alling Lander Company	300 East Johnson Avenue	Olin Corporation Chemical Group	359 Knotter Drive
Ball and Socket Lagoon	Willow Street	Oslo Control	328 Industrial Avenue
Ball and Socket Manufacturing	Willow Street	Peerless Screw	286 Sandbank Road
Bovano's	830 S. Main Street	Suburban Excavators	1074 S. Main Street
Carbide Mold	349 Industrial Avenue	Superior Steel Products	Peck Lane
Cheshire Associates	604 W. Johnson Avenue	TRW-Dot Fastener Division	250 Knotter Drive
Cheshire Municipal Landfill	Waterbury Road	US Chemical Corporation	264 Sandbank Road
County Wide Construction	340 E. Johnson Avenue	Dalton Enterprises	493 W. Main St.

GLOSSARY:

Cancer rate: The number of new cases of cancer divided by the population. Rates are usually expressed as number of cases per 1,000, 10,000 or 100,000 persons. Rates allow the comparison of cancer incidence in populations that are of different sizes.

Cancer Risk: A theoretical risk for getting cancer if exposed to a substance every day for 70 years (a lifetime exposure). The true risk might be lower.

Epidemiology: The study of the distribution and factors that affect the distribution of disease in the population.

Latency Period: The time between exposure and the development of disease.

Public Health Action: A list of steps to protect public health.

Population-based studies: Epidemiology studies that include a group rather than individuals in the analysis.

Non-Hodgkin's Lymphoma: Cancer in the lymphatic system. Likely to spread more quickly and respond less well to treatment than Hodgkin's disease. Non-Hodgkin's lymphoma incidence increases with increasing age. It also has been increasing in incidence during the past few decades.

Risk Factors: Traits, exposures or habits that may influence the development of disease. For example, a person who has the risk factor of smoking has an increased risk of developing emphysema.

Site of Diagnosis: The place in the body where the cancer is found (e.g. breast, lung, colon).

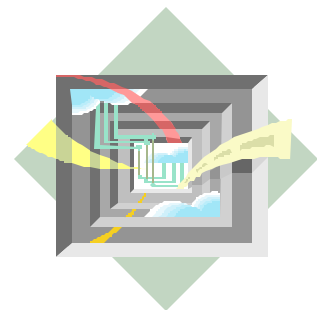
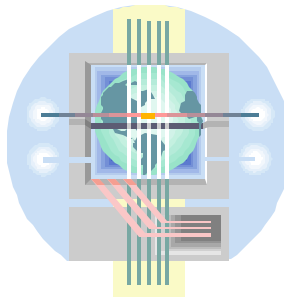
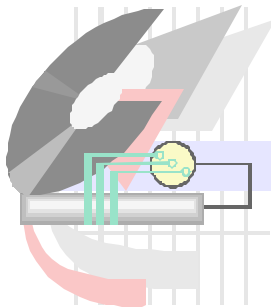
Statistically significant: When the results are unlikely to be due to random chance.

VOCs: Contaminants that can easily evaporate. Gasoline and other solvents are VOCs.

WHAT DID WE FIND? WHAT WERE THE CONCLUSIONS?

Environmental Data Findings:

- Levels of TCE in the public water supply exceeded drinking water standards from at least 1979 till 1988. Also, some level of contamination may have been present for an unknown period prior to 1979. Levels of DCP in the public water supply exceeded drinking water standards from at least 1983 until 1986.
- Some Cheshire residents were likely exposed to contaminants in the public water supply in the past through direct contact with the contaminated water (ingestion, skin contact, inhaling contaminated indoor air). Because the level of VOC contamination after 1988 was below drinking water standards, Cheshire residents who drank the water after this date were not exposed to the contaminants at levels of health concern.
- There were at least three private wells near Alling Lander/County Wide Construction where TCE levels were contaminated with elevated levels of TCE. These homes were put on a bottled water program after the discovery of the contamination and then transferred to public water in 1990. We did not document a widespread problem of private well contamination but data on this issue are very limited.
- Even though CT DPH has concluded that health effects are not likely to have occurred from the contaminated water supply, it necessary for the RWA to have taken action necessary to reduce contaminant levels in the public water supply because TCE and DCP levels exceeded health-based guidelines that were in effect at that time. The RWA's actions were successful in drastically reducing future exposures to contaminants in the water supply.



WHAT PUBLIC HEALTH ACTIONS HAVE ALREADY HAPPENED?

Actions Taken

- CT DPH has assisted the community in forming a Community Advisory Panel (CAP) made up of town leaders and concerned citizens to assist and advise CT DPH on the concerns of the residents, as well as serve as liaison between the public and CT DPH.
- CT DPH has met routinely with the Cheshire Community Advisory Panel, the CT Department of Environmental Protection, the Southern Connecticut Regional Water Authority (RWA), and Chesprocott Health District to discuss the PHA and try to come up with a resolution to many of these issues. CT DPH has also educated community leaders on environmental issues in Cheshire and methods in order to resolve many of these issues.
- CT DPH held an Open House in Cheshire on June 24, 2003 to hand out information and educate the residents about the Cheshire PHA process and information on environmental issues.

Actions Planned

- CT DPH will continue to provide education to the residents about environmental issues in the town of Cheshire. When this PHA is released, a revised version of this fact sheet concerning the results of the Cheshire PHA will be also distributed to community members.
- CT DPH will continue to work closely with the Cheshire CAP, CT DEP, RWA, and town leaders, as well as the Chesprocott Health District to ensure that the environmental concerns of residents are met.

WHAT DOES CTDPH RECOMMEND?

- CT DPH and the Chesprocott Health Department should continue to work with the community leaders to educate them about specific environmental issues like pesticide use, private well issues, etc., in the town of Cheshire in order to avoid unnecessary exposures.
- CT DPH, CT DPH (Water Division), and the RWA should continue to work together to ensure that the public water supply is safe. The RWA should continue to monitor the water supply for contaminants, especially VOCs.
- CT DEP, RWA, CT DPH (Water Division), and the EPA should continue to monitor the remaining 12 CERCLIS sites to ensure that any groundwater contamination immediately beneath the site is not leaching into any nearby private wells. In addition, if there are any sites with contaminated soil that are accessible to the public, these areas need to be fenced in. In the case of Alling Lander, the building on the property is currently easily accessible and should be boarded up and secured.

- CT DEP (Air Division) should continue to monitor the odors from Dalton Enterprises and make sure that they do not violate any regulations. Dalton Enterprises has had numerous complaints from nearby residents, but was never cited.
- CT DPH recommends that further evaluation of the Alling Lander, County Wide Construction, and Cheshire Municipal Landfill sites be undertaken to help determine if remediation is necessary.

FOR MORE INFORMATION:



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